

Power-over-Ethernet (PoE) Clocks

24IP Series



Overview

EST brand 24IP Series PoE Clocks plug directly into standard Ethernet jacks to provide network-wide synchronized time. Power-over-Ethernet technology allows these clocks to draw both time updates and power from standard network cables. This eliminates the need for a separate power source at each mounting site. Time is automatically set by a time server via Simple Network Time Protocol (SNTP). No master clock or serial connection is required.

24IP Clocks are configurable by means of a standard Telnet session, which configures the SNTP server address, time zone and daylight saving time options, display format (12- or 24-hour), and clock status reporting.

Both digital and analog models are available. Digital clocks have four- or six-digit LED displays and are visible from 150 feet (50 meters). Analog clocks are visible from 100 feet (30 meters).

Standard Features

- Power over Ethernet (PoE) technology derives power and synchronized time updates from your existing network
- Highly visible at over 100 feet
- Energy-efficient design
- No master clock or serial connection required
- Analog and digital formats available
- Automatic adjustment for Daylight Saving Time

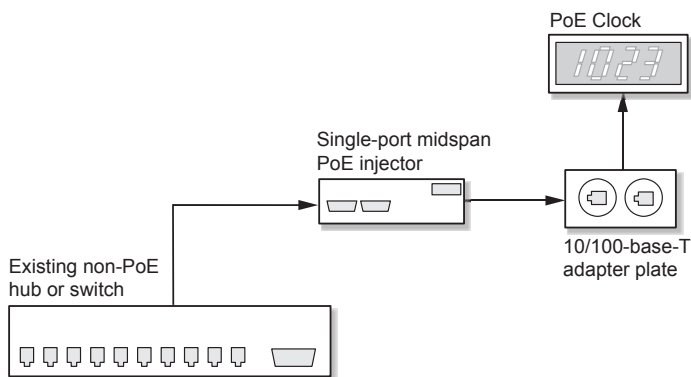
Application

Sites with PoE-enabled network equipment

24IP Series PoE Clocks automatically request and receive power from a PoE-enabled switch that conforms to the IEEE 802.3af standard. Sites equipped with PoE-enabled network equipment are most likely compatible with the 24IP Series PoE Clocks. A PoE network switch or PoE injector may not be able to provide sufficient power for multiple clocks. Ensure that your network can deliver 15.4 W per port, as specified by IEEE 802.3af, and that the power options are properly set to support this requirement. Some devices may not be able to provide sufficient power or may require certain power options in order to do so. See the Specifications table for power consumption requirements for each 24IP Series PoE clock. Refer to the manual supplied with your PoE-enabled power sourcing equipment for the specific output rating.

Sites without existing PoE-enabled network equipment

Sites that are not currently equipped with PoE-enabled network equipment are typically best served by midspan power injectors. The midspan power injector is a multiport, rack-mounted device similar to an Ethernet switch. The midspan power injector is typically installed in the rack near the existing Ethernet switch. Any ports that require PoE service are then routed through the midspan power injector. These injectors are typically available in 6-, 12-, 24-, or 48-port configurations. Edwards offers a single-port PoE injector for use with your 24IP Series PoE Clocks. See the Ordering table for information.



Configuration

Among the range of configuration options available for 24IP clocks are the following basic settings:

- Local time server
- IP address
- Local time zone
- Daylight Saving Time

Designating a local time server

On initial startup, the clock accesses the Internet and synchronizes with a time server. A local network time server must be specified for each clock by means of either of the two following protocols:

- **Network Time Protocol (NTP)** is a complex and highly precise Internet protocol used to synchronize computer system clocks to an external reference. NTP is typically accurate to within 10 milliseconds or better.
- **Simple Network Time Protocol (SNTP)** is a less complex version of NTP. It was developed for use where high accuracy timing is not necessary or justified.




PoE clocks query a designated time server via SNTP for correct time. The server address for this purpose is designated by the facility's IT department.

Assigning IP addresses

Each clock requires a unique IP address in order to access the network. IP addresses can be dynamic or static. Use either of the following protocols:

- **Dynamic Host Configuration Protocol (DHCP)** uses a configuration string loaded onto a server to automate clock configuration. It can be used to assign dynamic IP addresses and to automatically assign additional configuration values.
- **Terminal Network Protocol (telnet)** is a widely supported communications protocol used for remote configuration over a computer network. It can be used to set a static IP Address.

Specifications

	<div> Analog</div>	<div> Digital (hh:mm)</div>	<div> Digital (hh:mm:ss)</div>
Display Face	Analog Clock Dial: 12" (30 cm)	4-Digit: Red 7-segment LED	6-Digit: Red 7-segment LED
Viewing Distance	100 feet	150 feet	150 feet
Power Consumption	PoE, IEEE 802.3af compliant, 3W actual consumption	PoE, IEEE 802.3af compliant, 8W actual consumption	PoE, IEEE 802.3af compliant, 9.5W actual consumption
Dimensions	13.4" diameter x 2"D (35.3 cm x 5.1 cm)	12"L x 6"H x 2.2"D (30.5 cm x 15.2 cm x 5.6 cm)	17.5"L x 6"H x 2.2"D (44.5 cm x 15.2 cm x 5.6 cm)
Weight	2 lbs (0.9 kg)	Plastic Cabinet: 2 lbs (0.9 kg) Steel Cabinet: 3.8 lbs (1.7 kg)	Aluminum Cabinet: 2.5 lbs (1.1 kg) Steel Cabinet: 5 lbs (2.3 kg)
Time Display	12 hour format	12/24 hour format	
Optional Cabinet Colors	Not Available	Putty or Off-White	
Stainless Steel Cabinet	Not Available	Brushed Stainless Steel	
Accuracy	+/- 1 Second	+0/-200 milliseconds	
Standard Cabinet	Black Injection Molded Plastic		
Network Interface	10/100 BaseT		
Operating Humidity	95% maximum, non-condensing		
Certifications	UL/CSA 60950-1, ETL Listed, CE Marked, RoHS Compliant		
Operating Temperature	32° to 104° F (0° to 40° C)		
Warranty	Three (3) year		

Ordering Information

Model	Description	Shipping Weight
24IP12R-BK	OnTime POE Analog 12" clock	7#
24IP12RD-BK	OnTime POE Analog, Double Sided, 12" Clock and mounting hardware	15#
24IP4-BKP	OnTime Clock, 4 Digit, Black, Plastic Case	4#
24IP4D-BKP	OnTime Clock, 4 Digit, Black Plastic Case, Double Sided and mounting hardware	8#
24IP4F-BKP	Flush Mount 4 Digit Clock, Black Plastic	5#
24IP4-SS	OnTime Clock, 4 Digit, Stainless Steel Case	6#
24IP4D-SS	OnTime Clock, 4 Digit, Stainless Steel Case, Double Sided and mounting hardware	14#
24IP6-BKA	On Time Clock, 6 Digit, Black Aluminum	5#
24IP6D-BKA	On Time Clock, 6 Digit, Black Aluminum, Double Sided and mounting hardware	11#
24IP6F-BKA	Flush Mount 6 Digit Clock, Black Aluminum	6#
24IP6-SS	OnTime Clock, 6 Digit, Stainless Steel Case	8#
24IP6D-SS	On Time Clock, 6 Digit, Stainless Steel Case, Double Sided and mounting hardware	17#
24IP-POE	PoE injector	1.2#



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